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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/862,949 | 05/22/2001 | Brian M. Hackworth | 112056-0012 | 9748 |
| 24267 | 7590 | 09/25/2006 | EXAMINER | |
| CESARI AND MCKENNA, LLP | | | KE, PENG | |
| 88 BLACK FALCON AVENUE | | | ART UNIT | |
| BOSTON, MA 02210 | | | PAPER NUMBER | |
| | | | 2174 | |

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/862,949 | HACKWORTH, BRIAN M. | |
| | Examiner | Art Unit | |
| | Peng Ke | 2174 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 54-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 54-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to communications: Amendment filed on 9/06/2006.

Claims 1-28 and 54-68 are pending in this application. Claims 1, 14, 19, 25, 26, 54, 61, and 68 are independent claims.

Claim Rejections - 35 USC # 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 8, 13-16, 19, 23, 25-27, 29, 32-36 and 38-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Chu et al (hereinafter Chu), US-6,346,954.

As per claim 1, Chu teaches a system for reporting information related to predetermined storage volumes maintained on computer storage devices, comprising:

Each volume defining a logical arrangement of storage space on one or more the storage device, the storage devices accessible over a computer network; (figure 7, items 106, 108, and 110)

An interface to enable assigning the volumes to a plurality of groups of volumes, each volume assigned to a selected group;

A monitor process that identifies a desired group of the plurality of groups (figure 5, item 72; column 8, lines 10-20) and retrieves a statistical information from volumes of the desired group; and (figure 7, item 90 “array A”, column 8, lines 46-55) and

and a reporting process that organizes and displays the statistical information with respect to the volumes associated with the desired group to interested parties (col. 1 , lines 8- 15, col. 8, line 47-col. 9, line 8).

As per claim 2, which is dependent on claim 1, Chu teaches claim 1, Chu further teaches the system wherein the reporting process includes an event process for determining identities of the interested parties with respect to the volumes associated with the group to interested parties (col. 7, line 66-col. 8, line 12) (RAID groups, physical drives divided into arrays, Fig. 8).

As per claim 3, which is dependent on claim 2, Chu teaches claim 2. Chu further teaches the system wherein the event conditions include parameters of the volume and an associated device of the volume that exceed threshold levels (unusable/usable space) (col. 7, lines 20-31).

As per claim 4, which is dependent on claim 3, Chu teaches claim 3. Chu further teaches the system wherein the parameters include at least one of a central processing utilization level, a storage disk free space, a storage disk used space, or an environmental condition and operational status (col. 7, lines 52-65).

As per claim 7, which is dependent on claim 3, Chu teaches claim 3. Chu further teaches the system further comprising a database that retains information with respect to the interested parties and the threshold levels for the parameters (data stored on disk and on mirror disk) (col. 2, lines 24-36).

As per claim 8, which is dependent on claim 1, Chu teaches claim 1. Chu further teaches the system wherein each of the volumes are attached to each of a plurality of filers respectively (Fig. 3, 42, 44, 46).

As per claim 13, which is dependent on claim 1, Chu teaches claim 1. Chu further teaches the system wherein the reporting process is adapted to consolidate the statistical information from one or more volumes on one or more of the volumes on one or more storage appliances into the group (data distribution mode) (col. 7, 39-52).

As per claim 14, Chu teaches a graphical user interface for use with a management station or client personal station attached to a network having storage volumes, the graphical user interface comprising:

a display window that enables at least one of the volumes to be selectively associated with a desired group of volumes, the volumes associated with a plurality of groups of volumes, each volume including a luster of physical storage disks and defining a logical arrangement of storage space (figure 7, items 106, 108, and 110) and

a display window that shows information related to performance and status of the volumes of a selected group of plurality of groups (figure 5, item 72; column 8, lines 10-20) based upon criteria selected by the user (figure 7, item 90 "array A" column 8, lines 46-55).

As per claim 15, which is dependent on claim 14, Chu teaches claims 14. Chu further teaches the graphical user interface wherein the information

includes at least one of central processing unit usage, volume disk free space, volume disk used space; environmental conditions; general operational status and events in which an operation parameter exceeds a predetermined threshold (operational status) (col. 12, lines 35-44).

As per claim 16, which is dependent on claim 14, Chu teaches claims 14. Chu further teaches the graphical user interface wherein the events include alerts that are color-coded based

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upon severity of a problem (indicator in the form of icon, text, and/or altered shading) (col. 10, lines 2-13).

As per claim 19, Chu teaches a method for reporting information related to volumes maintained on at least one computer storage device, comprising the steps of:

Identifying a plurality of groups of the volumes (figure 5, item 72; column 8, lines 10-20) each group independent of physical arrangement of the computer storage devices in a network; retrieving statistical information with respect to the volumes, each volume including a cluster of physical storage disks and defining a logical arrangement of storage space; (figure 7, items 106, 108, and 110)

Organizing and displaying the statistical information with respect to the volumes associated with the group to interested parties. (col. 8, line 66-col. 9, line 8).

As per claim 23, which is dependent on claim 19, Chu teaches claim 19. Chu further teaches the method wherein the step of organizing and displaying includes displaying event information related to predetermined statistical information that exceeds desired parameters (physical drive failure may be indicate) (l. 9, lines 61-col. 10, lines 1-5).

As per claim 25, Chu teaches a computer readable medium operating on a computer in a network that includes one or more storage devices having volumes, the computer readable medium including program instruction for performing the steps of:

Identifying a plurality of groups of the volumes each group independent of a physical arrangement of the computer storage devices in the network; (figure 7, items 106, 108, and 110)

Retrieving statistical information with respect to a selected group of the volumes, each volume including a cluster of physical storage disks and defining a logical arrangement of storage space;

associated at least one of the identified volume with a group, the group independent of a physical arrangement of physical selected storage disks in the network; (figure 7, item 90 “array A” column 8, lines 46-55) and

organizing and displaying the statistical information with respect to the volumes associated with the group to interested parties (col. 1, lines 8-15, col. 8, line 47-col. 9, line 8).

As per claim 26, Chu teaches a method for organizing and displaying information with respect to one or more volumes on one or more storage appliances attached to a network, the method comprising the steps of:

establishing a plurality of groups (figure 5, item 72; column 8, lines 10-20) of one or more of the volumes, each group based upon predetermined reporting criteria, (figure 7, item 90 “array A” column 8, lines 46-55) each volume including a cluster of physical storage disks and defining a logical arrangement of storage space, each volume having statistical information associated therewith; (figure 7, items 106, 108, and 110) and

consolidating the statistical information collected from a selected group of the plurality of groups with respect to the volumes in the selected group for display to interested parties (Fig. 4-7, col. 10, lines 34-45).

As per claim 27, Chu teaches the method further comprising known predetermined threshold values to parameters of the statistical information generating an event condition when

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the at least one of the parameters exceeds at least one of the threshold values, respectively (col. 8, line 66-col. 9, line 8).

As per claim 54, it is rejected under the same rationale as claim 25. Supra.

As per claim 59, Chu teaches method of claim 54. Chu further teaches directing a user to network based utilities in connection with the information. (figure 7, items 106, 108, and 110)

As per claim 61, it is rejected under the same rationale as claim 25. Supra.

As per claim 66, it is of the same scope as claim 59. Supra.

As per claim 68, it is rejected under the same rationale as claim 25. Supra.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6, 9-12, 17-18, 20-22, 24, 28, 30, 31, and 37 are rejected under 35 USC 103(a) over Chu et al. (hereinafter Chu), 6,346,954.

As per claim 5, Chu teaches the system of claim 1 but does not teach the system wherein the event process included is adapted to e-mail event information to at least some of the interested parties. However, Official Notice is taken that using electronic messages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the

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time of the invention to use electronic messages as a means of notification in order to both log the notification in the form of an e-mail and provide instant notification to the user.

As per claim 6, Chu does not teach the system wherein the e-mail of the event information includes web links for use by the interested parties. However, Official Notice is taken that relaying web links to users through e-mail is well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the use of web links in order to provide a greater wealth of information to users.

As per claim 9, Chu teaches the system comprising a command process that reports the statistical information to at least some of the interested parties (col. 4, lines 28-31, operational status. Chu does not teach process of generating web pages. However, Official Notice is taken that generating web pages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the process of generating web pages in order to display the statistical information calculated in Chu on a network.

As per claim 10 and 21, Chu teaches the system wherein the graphical user interfaces enable display of the statistical information in a plurality of predetermined windows and boxes within the windows based upon selection criteria entered by the interested parties (in response to user selections) (col. 3, lines 38-58) Fig. 6). Chu does not teach process of generating web pages. However, Official Notice is taken that generating web pages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the process of generating web pages in order to display the statistical information calculated in Chu on a network.

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As per claim 11, Chu teaches the system comprising alerts displayed on the graphical user interface based upon problems identified by the monitor process with respect to the volumes or devices associated with the volumes (col. 4, lines 15-31).

As per claims 12, Chu teaches the system wherein the alerts are color-coded based upon severity of the problems (indicator in the form of icon, text, and/or altered shading) (col. 10, lines 2-13).

As per claim 17, Chu teaches the method of claims 14 and 15 but does not teach the graphical user interface further comprising a link box that directs a user to network or Internet-based utilities in connection with the information. However, Official Notice is taken that relaying web links with information to users is well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the use of web links in order to provide a greater wealth of information to users.

As per claim 18, Chu does not teach the graphical user interface wherein each display window is formatted as a web page and is displayed on a web browser. However, Official Notice is taken that generating web pages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the process of generating web pages for display in order to provide links through the display window.

As per claim 22, Chu teaches the method further comprising changing the predetermined display format based upon user-selected criteria (col. 8, lines 47-55).

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As per claim 24, Chu teaches the method wherein the step of displaying the event information includes providing color-coded alerts that indicated a severity of a problem associated with the respective event (indicator in the form of icon, text, and/or altered shading) (col. 10, lines 2- 13).

As per claim 20, it is of the same scope as claim 5. Supra.

As per claims 55- 57, and 60, they are of the same scope as claim 5, 9, 10, and 18 respectively. Supra.

As per claim 58, it is of the same scope as claim 17. Supra.

As per claims 62- 64, and 57, they are of the same scope as claim 5, 9, 10, and 18 respectively. Supra.

As per claim 63, it is of the same scope as claim 17. Supra.

Response to Argument

Applicant's arguments filed on 9/06/2006 have been fully considered but they are not persuasive.

Applicant's argued that Chu fails to teach a plurality of groups of volumes.

Examiner disagrees. Each array in Chu is a group of volume. (figure 7, items 106, 108, and 110; Examiner also considered each logical drive to be a volume) Furthermore, Chu keeps statistical information of a plurality of arrays. (figure 5, item 72, column 8, lines 10-20)

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peng Ke whose telephone number is (571) 272-4062. The examiner can normally be reached on M-Th and Alternate Fridays 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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